

Employment Status and Educational Achievements in Universities: Evidence from Southeast Nigeria

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Abstract:

Introduction: Educational achievement has remained the common yardstick for assessing human capital development across the world. However, it has been observed that Nigeria is one of the developing countries facing the challenge of low level of academic achievement by employees in the university system, which in turn has grave implications for the overall performance of the Nigerian university system in terms of efficient work delivery.

Methods: This study adopts a robust and stratified sampling technique to select 4,122 employees in selected federal universities in the southeast of Nigeria and uses structural questionnaire and binary logistic regression to analyse the effect of employment status on academic achievement in South East Nigeria.

Results: The findings show that employment status negatively and significantly influences the academic achievement of employees in Nigerian universities.

Discussion: The major focus of this study is to examine the impact of employment status on educational achievement in the universities for southeast, Nigeria. To drive more effective and efficient service delivery in the universities, there is need for adequate salary enhancement for employees in order to motivate them to strive for higher educational attainments.

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Limitations: The study was carried out in federal universities in Nigeria. It is expected to expand the study to cut across both private, states in Nigeria for effective and efficient comparison among the universities found in southeast geopolitical zones.

Conclusion: The study concludes that government should continuously motivate these employees so that they can strive for higher educational attainments.

Key words: employment, academic achievement, human capital development, binary logit regression model, Nigeria.

Introduction

The benefits of academic achievement for economic growth and development cannot be overemphasised. In underdeveloped countries like Nigeria, academic achievement is recognised as most prerequisite for appointment, promotion, job placement, employment status as well as a core value of assessment for human capacity and development. It is also used to measure the general knowledge individuals acquired through their exposure to research and learning in the university or other institutions of higher learning (IHL). According to Gordon (1984), academic achievement is described as academic degrees used to explain good reflections of ability, indicators of attitude, perseverance and effort. Academic achievement provide basis for institutional promotion and accreditation process in the university (Baverstock & Wenger, 2018). This study focuses on academic degree as an indicator for measuring academic achievement in the university. This indicator takes a value of one if an employee in the university possesses higher degree, while it takes a value of zero if otherwise.

It has been recently observed that employment status and academic achievement are two important issues affecting the academic calendar of universities in most developing countries like Nigeria. These issues are important because they have serious implications for the welfare of university workers, who have incessantly embarked on strike actions in recent years, thereby creating inefficiency in service delivery in the university system. Figure 1 shows the percentage distribution of academic achievement by employment status of workers Nigerian universities in Southeast, Nigeria.

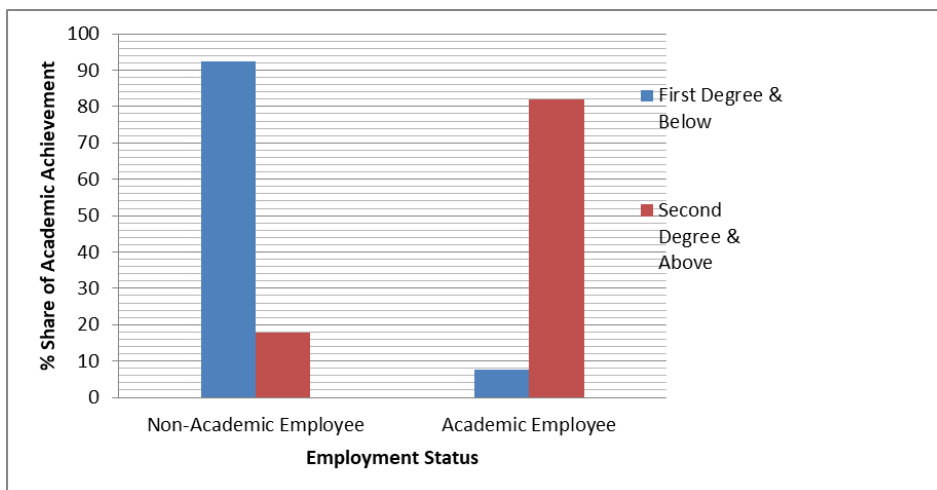


Figure 1. Author's computation on employee degree in Nigerian universities for southeast geopolitical zone using SPSS (Source: Author's computation on employee degree in Nigerian universities for southeast geopolitical zone using SPSS).

Figure 1 shows that the employment status for non-academic employees indicate higher share of academic achievement for the first degree and below than for the second degree and above. Figure 1 shows that 92.37% of non-academic employees had the first degree and below, whereas only 7.63% of academic employees had the first degree and below. Additionally, the employment status for academic employees in Figure 1 shows that academic employees have more academic achievement for the second degree and above than they have of the first degree and below. The percentage share of academic achievement shows that about 17.93% of non-academic employees had the second degree and above, while 82.07% of academic employees had the second degree and above. In general, Figure 1 illustrates that the employment status for academic employees on the average shows more of the second degree and above than for non-academic employees, while the employment status for non-academic employees indicates more academic achievement for the first degree and below.

The importance of academic achievement by university employees cannot be overstressed in the third world countries like Nigeria. The significance of academic achievement among these employees according to Quach & Mullineux (2006) includes: income acquisition through enhancement of salaries, improved standard of living and consumption. According to Dunn (2008), employment enhances self-esteem and makes the employee feel needed, valued, and appreciated. It also enables them to receive affirmations not easily acquired elsewhere. Furthermore, it provides financial freedom, inclusive growth and decision making power (Min & Xiaolin 2011). It is a stronghold for

sustainability of economic growth and development (Tripathi 2013). However, the issue examined in this paper is if employment status influences employee academic achievement in the universities. In general terms, employment is assumed to offer an adequate help for academic achievement, efficient service delivery, commitment to duty and full participation in the academic business of the university.

Despite the important role of employment in enhancing academic achievement among employees in Nigerian universities in the South-East, it has been revealed that overtime, the university system in Nigeria has failed to achieve a reasonable level of capacity building, intellectual capital as well as quality knowledge to drive the economy in the present dispensation (Iheriohanma, 2011). The systemic failure in the university system has seriously affected the university structure including human capital development of both academic and non-academic employees. The work environment in Nigerian universities has not been fair in terms of promoting academic achievement, research, teaching and human capital development. Indeed, most of the service periods available to the system are spent on strike actions and demonstrations by employees in the university. These incessant strikes among the employees in the university system have greatly affected the efficient service delivery and robustness of intellectual development among the employees in Nigerian universities (Osoba, 1996).

Adeniji and Adekunjo (2010) provided some insights on the purpose for establishing universities in Nigeria. They revealed that university is a citadel established for academic purposes, and that they should not be seen as separate entity from the larger society where they operate. They also revealed that the Nigerian university system operates with groups of individuals performing certain unique uniform roles to make the system efficient. For instance, academic employees are trained for imparting knowledge on students while non-academic employees execute the policies of the governing councils of the universities. This separation employment status into academic and non-academic were argued to have been the cause of major setback not only job efficiency but also willingness to attain higher academic achievements in the universities in most developing countries like Nigeria. A reasonable percentage of employees in the universities are not motivated in terms of promoting their career due to their poor academic achievement. This is because a greater percentage of workers still have limited academic achievement, which in turn may affect their morale and job performance. This issue has been found to constitute serious impediment against higher academic achievement by university employees.

Nigerian government has made enormous efforts through the execution of various policies to guarantee optimum academic achievement by employees of Nigerian universities. The National Universities Commission (NUC) was established as an advisory agency under the auspices of the Federal Ministry of Education. It was expected to be a channel for all external supports to Nigerian universities. Funding of the universities and payment of earned allowances and

minimum wage are the contributions from the government through the NUC to support employees of the universities in terms of income enhancement. The commission was established to monitor day to day activities of universities and promote academic achievement by the employees. These contributions from the government are aimed at ensuring that employees of Nigerian universities attain adequate academic achievement needed to meet up with global competitiveness. Despite these efforts by the NUC, it appears that employment status has not been able to provide the needed help to promote the academic achievement of employees in Nigerian universities.

1 Contributions to knowledge and value addition

Many studies in the current literature, particularly those from outside Nigeria (Arratibel et al., 2007; Min & Xiaolin, 2011; Tripathi, 2013; Biswas & Saha, 2014; Aoyagi & Ganelli, 2015; Georgescu & Herman, 2019; Aliyu, 2019; Lajčin, 2021; Semjén, Le, & Hermann, 2018) focused on how economic growth is influenced by employment. Biswas and Saha (2014), for instance, investigated how economic growth impacted by employment using aggregated data. In Nigeria, studies like Igbatayo et al. (2017) focused on the contributions of employment creation on inclusiveness of economic growth, but did not consider the effect of employment status on academic achievement. Other studies in Nigeria (Igboegwu & Okonkwo, 2012; Titus et al., 2016; Fredrick, 2011) examined the influence of gender and location on the academic achievement of students. These studies did not consider the important role of university degree as an indicator in measuring academic achievement using cross-sectional survey data. In addition, most of these existing studies employed time series data that have to do with aggregation effects. Thus, despite the growing literature on employment, the influence of employment status on academic achievement in Nigerian universities is yet to be investigated. It is the goal of this study to contribute to the literature by filling this gap.

Hence, this study departs from the extant literature by estimating the influence of employment status on academic achievement using cross-sectional data. The covariates included in the model are location, age, marital status, and years of service. These covariates were incorporated into the study not only to enhance the robustness of the estimates but also to provide the evidence required by policymakers to address issues that could motivate employees in Nigerian universities to strive for higher academic achievement. The remaining sections of this paper are prepared as follows. The section 2 of this study captures the general overview of literature review followed by data and method of analysis in section 3. The next sections after 3 which are sections 4 and 5 present the empirical results and the conclusion of the paper respectively.

2 Theoretical and empirical literature

Some theoretical perspectives that have been used to explain issues surrounding academic achievement include Social Cognitive Theory, Theory of Educational Productivity, Human Capital Theory and Signalling Theory. The Social Cognitive Theory as described by Goddard (2003) argued that an environment for which an individual found him or herself has great negative influence on academic performance. The theory also posits that the individual characteristics of learners have significant roles in their academic success. This implies that school climate, family background and the larger community play important roles in an individual's academic achievement. The theory posits that social support is relevant and it influences the improvement of academic achievement. This implies that the role of social support in students' academic achievement cannot be called negligible.

The Theory of Educational Productivity advanced by Walberg (1981) identified the core variables that are responsible for students' academic achievements. This theory claims that students' cognitive, behavioural, and attitudinal traits as well as their immediate psychological conditions affect their academic achievements. The theorist explained that core variables like student ability/prior performance, support, developmental/age level, quantity/quality of instruction, climate of classroom, home environment and exposure influence students' academic achievements. The theory established that exogenous factors strongly influence students' academic achievements. The exogenous factors as explained by the theory include family background, ethnicity, and gender.

An important theory that relates education to labour outcomes is the Theory of Human Capital proposed by (Becker, 1993). This theory postulates that higher educational achievement increases the productivity of an individual, thereby enhancing job performance. The theorists argue that education creates marketable knowledge and relevant abilities for job performance. Thus, the higher the educational achievement of an individual, the more successful the individual becomes in the labour market with respect to income and work opportunities. Even though this theory has been widely acknowledged as an important instrument for explaining the relationship between educational achievement and labour market outcomes, it has also been criticized based on its assumptions. The theory is founded on absolute foresight, which means that employers will assess employees' abilities objectively and rationally based on their educational achievements (Cai, 2012). However, labour market situations are characterized by uncertainties, among which are imperfect knowledge of job seekers' characteristics, uncertainty of quality of schooling and imperfect information of future condition for demand and supply (Cai, 2012; Levhari & Weiss, 1974).

The Signalling Theory (also known as the Screening Theory) deals with information asymmetries that are not easily resolved in principal-agent relationships (Arrow, 1973; Spence, 1973; Stiglitz, 1975). It is built on the

premise that an employer's hiring decision is an investment decision. Employers carry out the recruitment decision under conditions of uncertainty. As such, when taking recruitment decisions, employers consider signals portrayed by the level of educational achievement or attainment of the job seekers. Hence, employment seekers forward signals about their levels of ability to employers through their educational achievement, while employers interview the job seekers' ability through the signals that their educational credentials transmit (Cai, 2012). Educational achievement, therefore, becomes a yardstick to measure quality and ability.

Some studies in the extant literature have examined the synergy between outcomes of labour market and educational attainment. For example, Thomas and Daniel (2009) examined the influence of education on job performance in the U.S. using meta-analysis. The study also accounted for demographic and socio-economic factors. Significant results were obtained for race, job level, gender and job complexity, as important elements in the education-job performance relationship. The study also revealed that educational level contributes significantly to certain job categories like managerial jobs, but contrarily contributes less for training programme jobs. In another study, Tentama and Abdillah (2019) revealed a significant synergy between academic achievement and employability. The study confirmed that the higher the academic achievement and self-concept, the higher the employability among graduate students, and vice versa.

However, some scholars have also found mixed results while investigating the employment-academic achievement relationship among college students. Dadgar (2012), Daniels (2016), Simón et al. (2017) and Muluk (2017) investigated the impact of paid employment on academic performance of college students. Despite different statistical techniques adopted by these studies in various study areas, they all found that part-time employment does not significantly affect the level of academic achievement of the sampled students. Contrastingly, García-Vargas et al. (2016) found negative significant influence of employment on academic performance of students even after accounting for other socio-economic and demographic factors.

Some studies in Nigeria focused on the influence of some factors such as demographic and socio-economic on academic achievements. Fredrick (2011), Igboegwu and Okonkwo (2012), Alade et al. (2014), Alordiah et al. (2015), and Titus et al. (2016) estimated influence of school location, gender and socio-economic status on academic achievements in Mathematics, Chemistry, Economics and Agriculture. These studies used descriptive statistics focused on students in both urban and rural areas in Nigeria. The findings of these studies show that male students performed better academically than female students, students from urban areas performed better than students in rural areas and students from households with high socio-economic status outperformed students from households with low socio-economic status. Some other empirical

studies done in Nigeria clearly shows that education is a critical component of human capital development (Madueme, Orji, Johnson, & Anthony-Orji, 2021; Orji, Ogbuabor, Iwuagwu, & Anthony-Orji 2020; Orji, Ogbuabor, Anthony-Orji, Okoro, & Osondu, 2020; Orji, Ogbuabor, Nwosu, Anthony-Orji, & Isaac, 2019). However, the influence of employment status on academic achievement of employees in Nigerian universities has not yet been investigated. This study seeks to fill this important gap in the literature.

3 Methodology and theoretical framework

This study is built on the Social Cognitive Theory. According to Goddard (2003), this theory shows that an individual and level of academic achievement depends on the environment. Essentially, the theorist draws attention to situations in which some individuals are not able to obtain any form of support from their immediate environment in their quest for higher educational achievement. This situation in which an individual experiences deprivation in their quest for advancing in knowledge due to lack of support from their immediate environment can greatly hamper human capital development and slow down capacity building in Nigerian universities.

When investment in capacity building is obstructed due to lack of social support, the trickle-down effect is that universities will eventually face the challenge of moral hazard or adverse selection due to environmental failure. This failure could affect the general performance of employees in Nigerian universities. This suggests that employment status may be relevant in promoting human capital development in the universities. Thus, the theory shows that when an individual experiences deprivation arising from lack of support from their immediate environment, such deprivation could greatly influence academic growth of such individual. Such deprivations, even when the individual has the desire for higher educational attainment, lead to some of the serious problems facing universities in third world countries like Nigeria (Iheriohanma, 2011).

A time dimensional approach for cross-sectional survey data of Nigerian Universities chosen from southeast Geo-political zone which comprises five states, Imo, Enugu, Ebonyi, Anambra and Abia were used in the study. The study used one federal university to represent each state. For instance, University of Nigeria, Nsukka for Enugu state, Nnamdi Azikiwe University, Awka for Anambra state, Federal University of Technology, Owerri for Imo, Alex Ekwueme University, Ndufu-Alike for Ebonyi, and Michael Okpara University of Agriculture Umudike for Abia state (NUC, 2020). The study employed structural interviewer administered questionnaire to capture information from employees in each of the University. The target objective of the survey is to ascertain quantitative information with respect to employment status and academic achievement among employees in the Nigerian Universities for the state in the Southeast geo-political zone of Nigeria. The data sampling technique for the study is stratified random sampling technique, the same sampling

approach adopted by (Adejare et al., 2020; Yolcu, 2020). However, the sample size of four thousand one hundred and twenty-two (4,122) employees was used for the study.

4 Model specification and results

The logistic regression model is a probability estimation model used when the controlled variable is a binary variable while the covariate variables are scale variables (Verbeek, 2004; Ojonta & Ogbuabor, 2021). Accordingly, this study used a binary logit model in estimating the response of employee academic achievement to employment status in universities in South-eastern part of Nigeria. Since the controlled variable of this study, which is academic achievement, is a measurement variable categorised into two forms (i.e. it is a dichotomous variable), this study adopted the modelling technique of Astari and Kismiantini (2019). In the binary logit model adopted for this study, π_i is used to represent the academic achievement of employees in Nigerian universities, while X_i is used to show the set of covariate variables, which are either continuous or categorical variables. It is assumed in this study that every category of academic achievement is not an independent event. Hence, the binary logit model is labelled as two results for the measurement of welfare on how employment status is influenced. This implies, the estimation of binary logistic regression influences the chances that an employee i has one of the j mutually exclusive university degree (0 = without higher degree; while 1 = with higher degree). Hence, Justino et al. (2008), this chances can be presented as:

$$P(\pi_i = j) = \frac{1}{1 + e^{-(z)}} \quad (1)$$

where: $Z = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_p X_p$; $\beta_0, \beta_1, \dots, \beta_p$ are regression parameters; $X_1, X_2, \dots, X_p$ are explanatory variables, and π is the probability that an employee operates with a higher degree as an academic achievement.

All the variables in equation (1) are defined as shown in Table 1. These variables are also interpreted as follows:

X_1 denotes LOC, which is the location of assignment in the university. This is measured by job functions of the employees in the university (Categorical variable: 1 if the employee is located in a non-direct teaching unit in the universities; 2 if the employee is located in a direct teaching unit).

X_2 denotes SX, which describes the gender of employee in the university (Binary: 1 if employee is male and 0 otherwise).

X_3 denotes MS, which describes the marital status of the employees in the university (Binary: 1 if the employee is married and 0 if the employee is single).

X_4 denotes AG, which is the age at the point of employment in the university. This describes how old the employee was when he was employed. The age is a binary variable, such that 1 shows that the employee was 35 years old and

above, while 0 shows that the employee was more than 35 years old at the point of employment.

X₅ denotes LOS, which describes the length of service of an employee in the university until retirement (Categorical variable: 1 if employee has spent 20 years and below in the service of the university, and 2 if the employee has spent above 20 years in the service of the University).

X₆ denotes EMP, which stands for employment status of the employee (Binary: 1 if the employee is an academic staff, and 0 if the employee is a non-academic staff).

Table 1

Coding of variables included in the Binary Logit Model

<u>Variable Name</u>	<u>Variable Label</u>	<u>Coding</u>	<u>Expected Sign</u>
<i>Dependent Variable:</i>		1= With higher degree	Not
Academic achievement	ACH(Y)	0=Without higher degree	Applicable
<i>Independent Variables</i>			
Location	LOC(X ₁)	1= Non-Direct Teaching Units	(+/-)
		2= Teaching Units	
Gender	SX(X ₂)	1= Male	(+/-)
		2=Female	
Marital Status	MS(X ₃)	1= Married	(+/-)
		2 = Single	
Age	AG(X ₄)	1 = Below 35 Years	(+/-)
		2 = Above 35 Years	
Year	LOS(X ₅)	1=1-20Years	(+/-)
		2=Above 20Years	
Employment Status	EMP(X ₆)	1=Academic Employment	(+/-)
		2= Non-Academic Employment	

Source: Author's computation on employee degree in Nigerian universities for southeast geopolitical zone using SPSS

Table 2 shows the share of teaching and non-teaching (academic & non-academic) employees by percentage in Nigerian universities. The table shows that higher degree category reported higher percentage for academic employees than non-academic employees for both male and female. Conversely, non-higher degree category shows higher percentage for non-academic employees than

academic employees. This implies that academic employees attained higher academic achievements than non-academic employees regardless of whether the employees in question were male or female. These are shown quantitatively in Table 2.

Table 2

Percentage share of academic achievement according to employment status

	<i>Academic Employee</i>				<i>Non-Academic Employee</i>			
	<i>Male</i>	<i>% Share</i>	<i>Female</i>	<i>% Share</i>	<i>Male</i>	<i>% Share</i>	<i>Female</i>	<i>% Share</i>
Higher Degree	828	81.1	499	77.36	776	62.73	648	53.16
Non-Higher Degree	193	18.9	146	22.64	461	37.27	571	46.84
Total	1021	100	645	100	1237	100	1219	100

Table 3 provides the results of the binary regression model on the influence of employment status on academic achievement of employees in Nigerian universities. The p-values of the Wald statistics for each covariate variable indicate whether the contribution of each covariate variable is significant at the 5% level or otherwise. From the table, the “p-value” column shows the variables that are contributing significantly to the predictive ability of the model at 5% level of significance. These variables are location, gender, marital status, age, year, and employment status. The dependent variable, which is academic achievement, is a dummy categorised as probability (Pr =1) if employee has a higher degree and Pr=0 if the employee does not have a higher degree.

Table 3

Logistics regression estimates of factors influencing academic achievement

Observation: 4122

Pseudo R-Square: 0.193

Correctly predicted: 70.1%

Dependent Variable: Academic achievement

<i>Variables</i>	<i>B</i>	<i>Std Error</i>	<i>p-value</i>	<i>Exp(B)</i>
Location	0.201	0.082	(0.015)**	1.222
Gender	0.346	0.073	(0.000)***	1.414
Marital status	0.926	0.086	(0.000)***	2.525
Age	-0.459	0.074	(0.000)***	0.632
Year	-1.500	0.133	(0.000)***	0.223
Employment status	-1.288	0.088	(0.000)***	0.276
Intercept	2.121	0.180	(0.000)***	8.341

Note: B.: Represents Coefficient Estimation

Std Error: Robust Standard Error

Exp(B): The Odd ratio computed as exponential of Coefficient

p-value: Computed for test of significance

***, ** Indicate the significance level at 1% and 5% respectively.

At 1% level, Table 3 shows that employment status significantly affects academic achievement in the universities using non-higher degree as base outcome. From the table, the significance (Sig) level determines the variables that contribute to the academic achievement. These variables are location, gender, and marital status. The results suggest that the higher the employment status is observed in the university, the lower the tendency that employee will achieve higher degree. This finding is in line with Agboola (2006). It is also in line with the study of Owolabi and Etuk-Irien (2009), which showed that age and years of service have negative influence on academic achievement. Thus, employment status has a negative influence on the academic achievement of employees in the university. The probability value of 0.000, which is significant at 1% level, shows that the year which represents year of service is another important factor. This result implies that the more the year of service, the lesser the tendency that the employees will have academic achievement, which is in line with the findings of Owolabi and Etuk-Irien(2009),which also established that location is an important factor influencing academic achievement. It is also in line with the study by Ganai and Muhammad (2013), who demonstrated that gender is relevant for academic achievement. The results are also in line with the findings of Busch (1995) and Ali (2013), which suggest that marital status positively and significantly influence academic achievement.

Conclusion

This paper estimated the impact of employment status on academic achievement of employees in the universities in Southeast, Nigeria. The covariate variables included in the study are location, sex, marital status, year of service, employment status and age. The findings indicate that three factors (including location, gender, and marital status) impact positively and significantly on academic achievement at the 5% level. In addition, it is also observed that employment status, age and years of service have negative and statistically significant influences on academic achievement. The main policy issue emerging from this study is that there is the need for the government to factor in location, gender, and marital status when making decisions about adequate funding and extension of service years, as well as the need to ensure adequate salary enhancement for employees in order to motivate them to strive for higher educational attainments, which will in turn drive more effective and efficient service delivery in the university system.

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